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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,464	08/28/2003	Shawn P. Keeney	WHLK/043	7110

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EXAMINER

TANG, SON M

ART UNIT PAPER NUMBER

2632

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

Office Action Summary	Application No. 10/650,464	Applicant(s) KEENEY ET AL.	
	Examiner Son M. Tang	Art Unit 2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-17 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-5, 7-9 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bechtel [US 5,896,092] in view of Markwell et al. [US 6,532,406; Markwell].

Regarding to claim 1: Bechtel teaches an alarm unit, comprising:

-a flashing circuit having a flashtube for generating a flash; and an integrated circuit U1 coupled to said flash circuit, for triggering said flash [as shown in Fig. 7, col. 11, lines 45-50 and col. 12, lines 58-67 to col. 13, lines 1-12], Bechtel does not specifically disclose that U1 is an application specific integrated circuit (ASIC) which coupled to said flash circuit, for triggering said flash. Since, (ASIC) is one of a known type of IC chip in electrical art for controlling light alarm. Markwell teaches an alarm unit 20 includes an application specific integrated circuit (ASIC) 35 for triggering the flashing pattern indication alarm 51 [as shown in Fig. 1, 3 and col. 4, lines 10-33]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention, to use ASIC chip as suggested by Markwell into the alarm unit of Bechtel, for the motivation of better control the specific alarm component such as flashtube. And since they are both in alarm unit environment they are perfectly combinable.

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Regarding to claims 4-5: Bechtel further discloses a current limiting circuit (R1, Q3, R17 and Q5) coupled to the integrated circuit U1, for constantly senses and limiting an input current level [as cited in Fig. 7, col. 12, lines 15-20, 57-67].

Regarding to claims 7-9: Bechtel and Markwell made of obvious in claim 1 above, Markwell does not specific show that the ASIC is an 18-pin, 16-pin or 8-pin package. Since, the ASIC chip capable to control multiple components, it would have been an obvious to one having ordinary skill in the art to have more/less pins on the chip as require for each specific alarm unit, including 18-pin, 16-pin or 8-pin.

Regarding to claim 11: Bechtel and Markwell made of obvious in claim 1 above, they are not specify that the ASIC provides a charge cycle that is greater than 8 Khz. However, as long as the flash circuit is being generated and the flashtube is being flashed, employing any frequency range for performing the same function would not constitute an inventive step but an obvious of design choice. Therefore, it would have been obvious of one having ordinary skill in the art at the time of the claimed invention to employ any known frequency range, such as greater than 8 Khz. to charging the flashtube as desired.

Regarding to claim 12: Bechtel and Markwell made of obvious in claim 1 above, Bechtel further teaches an audio circuit can be incorporated in the system [see col. 15, lines 59-63].

Regarding to claim 13: Bechtel and Markwell made of obvious in claim 11 above, Bechtel further teaches that a pizzo horn circuitry can be incorporated in each strobe unit [col. 15, lines 59-63]. Thus, it would have been obvious to one having ordinary skill in the art to

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recognized that the audio frequency for said audio warning signal would be selected as the system is selected frequency for flashtube.

Regarding to claim 14: Bechtel and Markwell made of obvious in claim 1 above, except for not specifically show a synchronization detection circuit for trigger said flash. Bechtel shows a circuit includes (D1, R15, R17, Q5 and C4) that senses the input signal current and trigger flash [see Fig. 7, col. 13, lines 1-13], which constitutes a synchronization detection circuit.

Regarding to claim 15: Bechtel and Markwell made of obvious in claim 1 above, Bechtel further discloses that transistor drive Q5 capability of greater than 7.3 volts [see col. 13, lines 5-8].

Regarding to claims 16-17: Bechtel teaches an alarm unit, comprising:
-a pizzo horn circuitry for generating an audio warning signal [see col. 15, lines 59-63] and an integrated circuit U1 coupled to said pizzo horn circuit, for triggering said audio [as shown in Fig. 7], Bechtel does not specifically disclose that U1 is an application specific integrated circuit (ASIC) which coupled to said horn circuit. Since, (ASIC) is one of many known type of IC chip in electrical art for controlling light alarm. Markwell teaches an alarm unit 20 includes an application specific integrated circuit (ASIC) 35 for triggering the audio alarm 56 [as shown in Fig. 3, col. 11, lines 55-59]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention, to use ASIC chip as suggested by Markwell into the alarm unit of Bechtel, for the motivation of better control a specific alarm component such as audio generator. And since they are both alarm unit environment, they are perfectly combinable.

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3. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bechtel in view of Markwell, and further in view of Preston [US 4,578,586].

Regarding to claims 2-3: Bechtel and Markwell discloses all the limitations as described above, Markwell further teaches ASIC is also operable to vary the LED flash pattern [col. 9, lines 23-25], but lack of specifically shows a switch coupled to the ASIC having a plurality of selectable positions representative of flash intensity. Preston teaches an alarm device comprises switch 180 for setting light/horn intensity [as shown in Fig. 5, lines 36-38]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention, to implement an intensity settings switch as suggested by Preston into the combination above, for the purpose of easy and safety, since the switches limited current to the light/horn.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bechtel in view of Markwell and further in view of Kataoka [US 4,625,151].

Regarding to claim 6: Bechtel and Markwell made of obvious above, they are not specific suggesting a DC to DC converter in the system, Kataoka teaches a flash device which comprising a DC to DC converter (3) coupled to an IC circuit [as shown in Fig. 1, col. 2, lines 20-25]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention to employ a DC to DC converter as suggested by Kataoka, into the system of combination above, for the purpose of regulating and stabilizing the voltage supply to IC, since flash tube would use more power when flashing, and after a flash the voltage drop to minimum.

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5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bechtel in view of Markwell and further in view of Hata [US 6,091,898].

Regarding to claim 10: Bechtel and Markwell made of obvious in claim 1 above, they are not specifically teaching that the flash circuit comprises a voltage doubler. It is known in the art that, voltage doubler is use for boosting voltage of flash circuit, Hata teaches a flash circuit 37 which comprises a voltage doubler 85, [as shown in Fig. 4, col. 14, lines 43-48, col. 15, lines 10-15]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention to implement the voltage doubler as suggested by Hata, into the system of combination above, in order to provide an available power to the flash circuit.

Response to Arguments

6. Applicant's arguments, filed 3/21/05, with respect to the rejection(s) of claim(s) 1-17 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Markwell et al. [US 6,078,269].

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wong [US 5,691,704], Wong [US 6,166,647] and Byrne et al. [US 6,437,698].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son M. Tang whose telephone number is (571)272-2962. The examiner can normally be reached on 4/9 First Friday off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571)272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Son Tang



Thomas J. Mullen, Jr.
Primary Examiner
Art Unit 2632

7-11-05